Improving Student Wellbeing, Academic Performance, and Group Work Skills Using Peer Mentoring

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Background

• Previous research into the predictors of academic success at university has identified social integration, academic integration, and how students respond to stress as positive predictors (Kirby & Sharpe, 2001). In order to better address the individual needs of students (particularly in large classes), many universities have introduced peer mentoring (Fox & Stevenson, 2006; Hill & Reddy, 2007).

• Combining group work and peer mentoring can help students transition from teacher directed to independent learning, something that some first year students find difficult.

• In the current study, peer mentors were provided training in small group interaction and then spent one hour in eight first year engineering tutorials, working with and facilitating small groups on an assessed group task. During this time they covered a range of prepared material around group work and group processes. Peer-mentors were current third-year engineering students who had a Distinction average.
Aims & Hypotheses

Aim: to evaluate the efficacy of a peer mentoring program embedded in tutorials in a first-year engineering course.

Compared to a control group, it is hypothesised that:

• More students who receive peer mentoring will continue with the course

• Students who receive peer mentoring will receive higher grades on a group-based assessment;

• Students who receive peer mentoring will express more positive views regarding their self-efficacy in group work; and

• Students who receive peer mentoring will have lower subjective ratings of anxiety and stress, and higher overall satisfaction with life.
Results

Table 1
Control Group and Peer Mentored Group Descriptive Statistics

<table>
<thead>
<tr>
<th>Variable</th>
<th>Beginning of Semester</th>
<th>End of Semester</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
</tr>
<tr>
<td><strong>Control Group</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Satisfaction With Life</td>
<td>26.2</td>
<td>5.33</td>
<td>25.7</td>
</tr>
<tr>
<td>DASS Anxiety</td>
<td>5.22</td>
<td>5.14</td>
<td>5.8</td>
</tr>
<tr>
<td>DASS Stress</td>
<td>9.33</td>
<td>8.92</td>
<td>8.8</td>
</tr>
<tr>
<td>Group Work Scale</td>
<td>39.58</td>
<td>6.32</td>
<td>41.1</td>
</tr>
<tr>
<td><strong>Peer Mentored Group</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Satisfaction With Life</td>
<td>24.45</td>
<td>4.56</td>
<td>27.05</td>
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<tr>
<td>DASS Anxiety</td>
<td>8.77</td>
<td>8.81</td>
<td>6.84</td>
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<tr>
<td>DASS Stress</td>
<td>14</td>
<td>5.03</td>
<td>12.95</td>
</tr>
<tr>
<td>Group Work Scale</td>
<td>38.15</td>
<td>4.36</td>
<td>41.3</td>
</tr>
</tbody>
</table>
Results

Hypotheses Supported

Results revealed 100% retention rate in the peer tutored group compared to 96% in the control condition. Significant differences were found between:

- groups on group task grades (controlling for high school ENTER score),
  \[ F(1, 47) = 4.42, p = .041, \eta^2 = .09, 95\%CI (<.01, .26). \]

- beginning of semester group work confidence and end of semester group work confidence in the peer mentored group only,
  \[ t(12) = 2.61, p < .05, d = 0.72, 95\%CI (0.10, 1.33). \]

- groups on their end of semester satisfaction with life,
  \[ F(1, 37) = 5.73, p < .05, \eta^2 = .13, 95\%CI (<.01, .33). \]

Hypothesis Not Supported

No significant differences were found between:

- groups on their end of semester confidence in group work.
- groups on levels of anxiety or stress at the end of the semester.
Conclusions

• This study has shown that peer mentoring can be effective in improving retention, student grades, self confidence in group work, and overall satisfaction with life.

• By embedding the program within the curriculum and focusing on a specific task, we have been able to:
  – ensure regular contact between mentor and student
  – allay the perception that being mentored means one is struggling
  – maximise the effectiveness of mentoring to a broad range of students who otherwise may not access additional support.

• Further research across a range of disciplines is needed to ensure the results found here can be generalised to other courses

References